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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,191	06/02/2000	Felix Henry	1807.1365	6838

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EXAMINER

COUSO, JOSE L

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 12/05/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,191

Applicant(s)

HENRY ET AL.

Examiner

Jose L. Couso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17, 26-29 and 31 is/are allowed.
- 6) ☒ Claim(s) 18-25, 30 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18-25, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Queiroz (U.S. Patent No. 5,867,598) in view of Matsuura et al. (U.S. Patent No. 6,459,816).

With regard to claims 18 and 22, de Queiroz discloses a method and apparatus for processing of a JPEG compressed image which describes means for generating an image data representing an image (see figure 1, element 52 and refer for example to column 6, lines 27-31); means for transforming the image data (see figure 3, element 100 and refer for example to column 7, lines 40-44); means for quantizing the transformed data (see figure 3, element 102 and refer for example to column 7, lines 44-48); and means for entropically encoding the quantized data (see figure 1, element 18, figure 3, element 108 and refer for example to column 2, lines 16-19 and column 7, lines 51-58); means for identifying a correct orientation of the image represented by the image data (see figure 2, element 66 and refer for example to column 11, lines 1-22, wherein de Queiroz describes addressing individual blocks by adding a header); and means for applying a geometric transformation to the transformed data in accordance with the result of the identification (see figure 7 and refer for example to column 8, lines 42 through column 9, line 45 and column 10, lines 35-67).

Although de Queiroz does not specifically use a wavelet transform, such a technique is well known and widely utilized in the prior art.

Matsuura discloses an image processing system for compressing image data including binary image data and continuous tone image data by a sub-band transform method with a high-compression rate which describes the use of a wavelet transform in a system which is concerned with entropy coding an image and then rotating the image data (see for example figures 1 and 2 and refer for example to column 10, lines 22-41).

Given the teachings of the two references and the same environment of operation, namely that of wavelet transform system primarily concerned with entropy coding an image and then rotating the image data, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for using a wavelet transform as taught by Matsuura in the de Queiroz system for the DCT transform therein. This is an engineering design, providing for a readily available processing element that is also compatible (both systems processing the transformed coefficient as does the claimed invention), which fails to patentably distinguish over the prior art absent some novel and unexpected result.

In regard to claims 19 and 23, de Matsuura describes characterized in that the image data are transformed into sub-bands corresponding to each of a plurality of resolution levels in the wavelet transforming step (see for example figures 1-3 ,7 and 8).

With regard to claims 20 and 24, de Queiroz describes characterized in that the result of the identification is classified in four kinds of cases (see figure 7, which shows

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five rotational classifications, namely 90°, -90°, 180°, Vertical Mirror and Horizontal mirror).

As to claims 21 and 25, de Queiroz describes characterized in that the method further comprises the step of storing the information showing the result of the identification and the encoded data (see for example figure 2, element 70 and refer for example to column 6, lines 63-67).

With regard to claim 30, de Queiroz describes a storage means, readable by a microprocessor, characterized in that it is adapted to implement the image processing method (see figure 3, which is carried out by Image Processor [figure 2, element 66]).

As to claim 32, de Queiroz describes a computer program product, loadable into a programmable processing apparatus, characterized in that it comprises software code portions adapted to implement the image processing method (see figure 3, which is carried out by Image Processor [figure 2, element 66]).

3. Claims 1-17, 26-29 and 31 are allowed.

4. The following is an examiner's statement of reasons for allowance: The prior art of the record fail to teach or suggest singly and/or in combination a method and device for modifying the geometric orientation of a digital image incorporated in an image acquisition apparatus adapted to acquire an image in accordance with one amongst several different orientations and to store the image in the form of a compressed file which provides for generating an image data representing an image, means for wavelet

transforming the image data, for identifying a correct orientation of the image represented by the image data and for applying a geometric transformation to the transformed data in accordance with the result of the identification as prescribed for in the claimed invention of independent claims 1 and 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Clarke et al. ('100) and ('917), Kraske, Bright et al., So et al., Zeng et al., Rious et al. all disclose systems which utilize wavelet transformation and rotation of the image.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.

Jlc
November 14, 2003



JOSE L. COUSO
PRIMARY EXAMINER